

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A bacteria strain characterized by exhibiting:
(a) a 7 α -dehydroxylase activity of less than 50%, and (b) a
5 bile acid deconjugation activity of less than 50%, and
descendants, mutants and derivatives thereof preserving
activities (a) and (b).

2. The strain of claim 1, which is a gram-positive
bacteria strain.

10 3. The strain of Claim 1, belonging to a species
selected from *Streptococcus thermophilus*, *Streptococcus*
faecium, and *Lactobacillus bulgaricus*.

4. The strain of Claim 3, wherein the bacteria strain
is *Streptococcus thermophilus* YS 52 deposited with the
15 CNCM, Collection Nationale de Cultures de Microorganismes,
Institut Pasteur, under the accession number I-1670.

5. The strain of Claim 3, wherein the bacteria strain
is *Streptococcus thermophilus* YS 46, deposited with the
CNCM, Collection Nationale de Cultures de Microorganismes,
20 Institut Pasteur, under the accession number I-1668.

6. The strain of Claim 3, wherein the bacteria strain is *Streptococcus thermophilus* YS 48, deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

5 7. The strain of Claim 3, wherein the bacteria strain is *Streptococcus faecium* SF 3, deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

10 8. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

15 9. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

20 10. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

11. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the

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CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

12. A pharmaceutical composition for preventing and/or treating diseases associated with or caused by an altered metabolism of bile acids, comprising an effective amount capable of producing a normalizing effect on such an altered metabolism in a patient suffering therefrom, of (1) at least one bacteria strain provided with: (a) a 7 α -dehydroxylase activity of less than 50%, and (b) a bile acid deconjugation activity of less than 50%, and descendants, mutants and derivatives thereof preserving activities (a) and (b), and (2) a pharmaceutically acceptable carrier.

13. The pharmaceutical composition of claim 12, wherein said at least one bacteria strain is a gram-positive bacteria strain.

14. The composition of Claim 12, wherein said at least one bacteria strain belongs to a species selected from the group consisting of *Streptococcus thermophilus*, *Streptococcus faecium*, and *Lactobacillus bulgaricus*.

15. The composition of Claim 14, wherein the bacteria strain is *Streptococcus thermophilus* YS 52 deposited with

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the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.

16. The composition of Claim 14, wherein the bacteria strain is *Streptococcus thermophilus* YS 46 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1668.

17. The composition of Claim 14, wherein the bacteria strain is *Streptococcus thermophilus* YS 48 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

18. The composition of Claim 14, wherein the bacteria strain is *Streptococcus faecium* SF 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

19. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

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20. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

5 21. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

10 22. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

23. The composition of Claim 12, comprising 10^3 to 10^{13} cells of the bacteria strain per gram of composition.

15 24. The composition of Claim 12, further comprising lactulose.

25. The composition of Claim 12, further comprising bile acid-based preparations, such as ursodeoxycholic acid and tauroursodeoxycholic acid.

20 26. A method for preventing and treating diseases caused by or associated with an altered metabolism of bile

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acids, said method comprising administering at least one bacteria strain characterized by exhibiting:

(a) a 7 α -dehydroxylase activity of less than 50%, and

(b) a bile acid deconjugation activity of less than

5 50%, and descendants, or a mutant or derivative thereof preserving activities (a) and (b).

27. A method of claim 26, wherein the at least one bacteria strain is a gram-positive bacteria strain.

28. The method of Claim 26, wherein the bacteria
10 strain belongs to a species selected from the group consisting of *Streptococcus thermophilus*, *Streptococcus faecium*, and *Lactobacillus bulgaricus*.

29. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 52 deposited with
15 the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.

30. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 46 deposited with
20 the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1668.

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31. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 48 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

32. The method of Claim 28, wherein the bacteria strain is *Streptococcus faecium* SF 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

33. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

34. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

35. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

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36. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

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